

SHEET 1 OF 4

INFORMATION DISCLOSURE
CITATION IN AN
APPLICATION
(PTO-1449)

ATTY. DOCKET NO.
005123 USA/
Consilium/Consilium

SERIAL NO.
09/928,473

APPLICANT
Horne L. KOH

FILING DATE
August 14, 2001

GROUP
~~2812~~ 2155

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	4,957,605	09/18/90	Hurwitt et al.	—	—	04/17/89
PBT	5,240,552	08/31/93	Yu et al.	—	—	12/11/91
PBT	5,369,544	11/29/94	Mastrangelo	—	—	04/05/93
PBT	5,444,837	08/22/95	Bomans et al.	—	—	12/29/93
PBT	5,665,214	09/09/97	Iturralde	—	—	05/03/95
PBT	5,695,810	12/09/97	Dubin et al.	—	—	11/20/96
PBT	5,824,599	10/20/98	Schacham-Diamand et al.	—	—	01/16/96
PBT	5,825,356	10/20/98	Habib et al.	—	—	03/18/96
PBT	5,831,851	11/03/98	Eastburn et al.	—	—	03/21/95
PBT	5,838,951	11/17/98	Song	—	—	08/28/96
PBT	5,859,777	01/12/99	Yokoyama et al.	—	—	05/13/97
PBT	5,871,805	02/16/99	Lemelson	—	—	04/08/96
PBT	5,943,550	08/24/99	Fulford, Jr. et al.	—	—	03/29/96
PBT	6,012,048	01/04/00	Gustin et al.	—	—	05/30/97
PBT	6,037,664	03/14/00	Zhao et al.	—	—	03/31/98
PBT	6,059,636	05/09/00	Inaba et al.	—	—	07/09/98
PBT	6,096,649	08/01/00	Jang	—	—	10/25/99
PBT	6,100,195	08/08/00	Chan et al.	—	—	12/28/98
PBT	6,114,238	09/05/00	Liao	—	—	05/20/98
PBT	6,150,270	11/21/00	Matsuda et al.	—	—	01/07/99
PBT	6,157,864	12/05/00	Schwenke et al.	—	—	05/08/98
PBT	6,181,013 B1	01/30/01	Liu et al.	—	—	03/13/00
PBT	6,212,961 B1	04/10/01	Dvir	—	—	02/11/99
PBT	6,226,563 B1	05/01/01	Lim	—	—	09/04/98
PBT	6,228,280 B1	05/08/01	Li et al.	—	—	05/06/98
PBT	6,237,050 B1	05/22/01	Kim et al.	—	—	09/04/98
PBT	2001/0006873 A1	07/05/01	Moore	—	—	02/13/01
PBT	6,259,160 B1	07/10/01	Lopatin et al.	—	—	04/21/99
PBT	6,281,127 B1	08/28/01	Shue	—	—	04/15/99
EXAMINER			DATE CONSIDERED			
Philpott			11-10-2004			

EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609; draw line through citation if not in conformance and not considered. Include copy of this form with next communication to Applicant.



SHEET 2 OF 4

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EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	6,317,643 B1	11/13/01	Dmochowski	—	—	03/31/99
PBT	6,339,727 B1	01/15/02	Ladd	—	—	12/21/98
PBT	6,355,559 B1	03/12/02	Havemann et al.	—	—	11/03/00
PBT	6,391,780 B1	05/21/02	Shih et al.	—	—	08/23/99
PBT	6,417,014 B1	07/09/02	Lam et al.	—	—	10/19/99
PBT	6,427,093 B1	07/30/02	Toprac	—	—	10/07/99
PBT	6,432,728 B1	08/13/02	Tai et al.	—	—	10/16/00
PBT	6,449,524 B1	09/10/02	Miller et al.	—	—	01/04/00
PBT	6,455,415 B1	09/24/02	Lopatin et al.	—	—	04/16/01
PBT	2002/0165636 A1	11/07/02	Hasan	—	—	04/24/02
PBT	6,484,064 B1	11/19/02	Campbell	—	—	10/05/99
PBT	6,495,452 B1	12/17/02	Shih	—	—	08/18/99
PBT	2002/0193899 A1	12/19/02	Shanmugasundram et al.	—	—	05/01/02
PBT	2003/0017256 A1	01/23/03	Shimane	—	—	06/12/02
PBT	6,515,368 B1	02/04/03	Lopatin et al.	—	—	12/07/01
PBT	6,517,414 B1	02/11/03	Tobin et al.	—	—	03/10/00
PBT	6,528,409 B1	03/04/03	Lopatin et al.	—	—	04/29/02
PBT	6,537,912 B1	03/25/03	Agarwal	—	—	08/25/00
PBT	6,580,958 B1	06/17/03	Takano	—	—	11/22/99
PBT	6,605,549 B2	08/12/03	Leu et al.	—	—	09/29/01
PBT	6,607,976 B2	08/19/03	Chen et al.	—	—	09/25/01
PBT	6,609,946 B1	08/26/03	Tran	—	—	07/14/00
PBT	6,616,513 B1	09/09/03	Osterheld	—	—	04/05/01
PBT	6,624,075 B1	09/23/03	Lopatin et al.	—	—	11/05/02
PBT	6,630,741 B1	10/07/03	Lopatin et al.	—	—	12/07/01
PBT	6,660,633 B1	12/09/03	Lopatin et al.	—	—	02/26/02
PBT	6,708,074 B1	03/16/04	Chi et al.	—	—	08/11/00
PBT	6,708,075 B2	03/16/04	Sonderman et al.	—	—	11/16/01
PBT	6,728,587 B2	04/27/04	Goldman et al.	—	—	12/27/00
EXAMINER <i>Philip S. Sauer</i>	DATE CONSIDERED 11-10-2004					

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				FILING DATE August 14, 2001		GROUP 2842 2155	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	EP 0 932 195 A1	07/28/99	EP	—	—	X	
PBT	EP 1 083 470 A2	03/14/01	EP	—	—	X	
PBT	GB 2 365 215 A	02/13/02	GB	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	Sun, S.C. 1998. "CVD and PVD Transition Metal Nitrides as Diffusion Barriers for Cu Metallization." <i>IEEE</i> . pp. 243-246.						
PBT	Tagami, M., A. Furuya, T. Onodera, and Y. Hayashi. 1999. "Layered Ta-nitrides (LTN) Barrier Film by Power Swing Sputtering (PSS) Technique for MOCVD-Cu Damascene Interconnects." <i>IEEE</i> . pp. 635-638.						
PBT	Yamagishi, H., Z. Tokei, G.P. Beyer, R. Donaton, H. Bender, T. Nogami, and K. Maex. 2000. "TEM/SEM Investigation and Electrical Evaluation of a Bottomless I-PVD TA(N) Barrier in Dual Damascene" (Abstract). <i>Advanced Metallization Conference 2000</i> . San Diego, CA.						
PBT	Eisenbraun, Eric, Oscar van der Straten, Yu Zhu, Katharine Dovidenko, and Alain Kaloyeros. 2001. "Atomic Layer Deposition (ALD) of Tantalum-Based Materials for Zero Thickness Copper Barrier Applications" (Abstract). <i>IEEE</i> . pp. 207-209.						
PBT	Smith, S.R., K.E. Elers, T. Jacobs, V. Blaschke, and K. Pfeifer. 2001. "Physical and Electrical Characterization of ALD Tin Used as a Copper Diffusion Barrier in 0.25 mum, Dual Damascene Backend Structures" (Abstract). <i>Advanced Metallization Conference 2001</i> . Montreal, Quebec.						
PBT	Kim, Y.T. and H. Sim. 2002. "Characteristics of Pulse Plasma Enhanced Atomic Layer Deposition of Tungsten Nitride Diffusion Barrier for Copper Interconnect" (Abstract). <i>IEIC Technical Report</i> . Vol. 102, No. 178, pp. 115-118.						
PBT	Elers, Kai-Erik, Ville Saanila, Pekka J. Soininen, Wei-Min Li, Juhana T. Kostamo, Suvi Haukka, Jyrki Juhanoja, and Wim F.A. Besling. 2002. "Diffusion Barrier Deposition on a Copper Surface by Atomic Layer Deposition" (Abstract). <i>Advanced Materials</i> . Vol. 14, No. 13-14, pp. 149-153.						
PBT	Peng, C.H., C.H. Hsieh, C.L. Huang, J.C. Lin, M.H. Tsai, M.W. Lin, C.L. Chang, Winston S. Shue, and M.S. Liang. 2002. "A 90nm Generation Copper Dual Damascene Technology with ALD TaN Barrier." <i>IEEE</i> . pp. 603-606.						
PBT	Van der Straten, O., Y. Zhu, E. Eisenbraun, and A. Kaloyeros. 2002. "Thermal and Electrical Barrier Performance Testing of Ultrathin Atomic Layer Deposition Tantalum-Based Materials for Nanoscale Copper Metallization." <i>IEEE</i> . pp. 188-190.						
PBT	Wu, Z.C., Y.C. Lu, C.C. Chiang, M.C. Chen, B.T. Chen, G.J. Wang, Y.T. Chen, J.L. Huang, S.M. Jang, and M.S. Liang. 2002. "Advanced Metal Barrier Free Cu Damascene Interconnects with PECVD Silicon Carbide Barriers for 90/65-nm BEOL Technology." <i>IEEE</i> . pp. 595-598.						
PBT	July 25, 2003. International Search Report for PCT/US02/24858.						
PBT	March 30, 2004. Written Opinion for PCT/US02/19062.						
PBT	April 9, 2004. Written Opinion for PCT/US02/19116.						
PBT	April 22, 2004. Office Action for U.S. Serial No. 09/998,372, filed November 30, 2001.						
EXAMINER 				DATE CONSIDERED 11-10-2004			


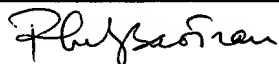
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INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005123 USA/Consilium/Consilium		SERIAL NO. 09/928,473 <div style="text-align: center; font-weight: bold; font-size: 1.2em;">RECEIVED</div> <div style="text-align: center;">MAR 30 2004</div>	
				APPLICANT Horne L. KOH		Technology Center 2100	
				FILING DATE August 14, 2001		GROUP 2812-2155	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
PBT	4,901,218	02/13/90	Cornwell	—	—	03/04/88	
PBT	5,427,878	06/27/95	Corliss	—	—	05/16/94	
PBT	5,761,065	06/02/98	Kittler et al.	—	—	03/30/95	
PBT	5,862,054	01/19/99	Li	—	—	02/20/97	
PBT	5,912,678	06/15/99	Saxena et al.	—	—	04/14/97	
PBT	5,926,690	07/20/99	Toprac et al.	—	—	05/28/97	
PBT	6,074,443	06/13/00	Venkatesh et al.	—	—	01/29/98	
PBT	6,111,634	08/29/00	Pecen et al.	—	—	05/28/97	
PBT	6,150,664	11/21/00	Su	—	—	06/29/99	
PBT	6,245,581 B1	06/12/01	Bonser et al.	—	—	04/19/00	
PBT	2001/0044667 A1	11/22/01	Nakano et al.	—	—	05/16/01	
PBT	6,346,426 B1	02/12/02	Toprac et al.	—	—	11/17/00	
PBT	6,363,294 B1	03/26/02	Coronel et al.	—	—	12/29/98	
PBT	6,442,496 B1	08/27/02	Pasadyn et al.	—	—	08/08/00	
PBT	6,486,492 B1	11/26/02	Su	—	—	11/20/00	
PBT	6,492,281 B1	12/10/02	Song et al.	—	—	09/22/00	
PBT	6,540,591 B1	04/01/03	Pasadyn et al.	—	—	04/18/01	
PBT	6,560,504 B1	05/06/03	Goodwin et al.	—	—	09/29/99	
PBT	6,590,179 B2	07/08/03	Tanaka et al.	—	—	02/26/01	
PBT	6,604,012 B1	08/05/03	Cho et al.	—	—	08/23/00	
PBT	6,618,692 B2	09/09/03	Takahashi et al.	—	—	02/26/01	
PBT	6,625,497 B2	09/23/03	Fairbairn et al.	—	—	07/10/01	
PBT	6,640,151 B1	10/28/03	Somekh et al.	—	—	12/22/99	
EXAMINER			DATE CONSIDERED				
			11-10-2004				

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				APPLICANT Horne L. KOH		Technology Center 2100	
				FILING DATE August 14, 2001		GROUP 2812-2155	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	0 397 924 A1	11/22/90	Europe	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	Rocha, Joao and Carlos Ramos. September 12, 1994. "Task Planning for Flexible and Agile Manufacturing Systems." <i>Intelligent Robots and Systems '94. Advanced Robotic Systems and the Real World, IROS '94. Proceedings of the IEEE/RSJ/GI International Conference on Munich, Germany 12-16 Sept. 1994.</i> New York, New York: IEEE. pp. 105-112.						
PBT	March 15, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.						
PBT	March 29, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
PBT	June 20, 2002. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.						
PBT	September 26, 2002. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.						
PBT	October 23, 2002. Office Action for U.S. Serial No. 09/469,227, filed December 22, 1999.						
PBT	December 17, 2002. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
PBT	February 10, 2003. Office Action for U.S. Serial No. 09/619,044, filed July 19, 2000.						
PBT	April 9, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.						
PBT	May 8, 2003. Office Action for U.S. Serial No. 09/637,620, filed August 11, 2000.						
PBT	June 18, 2003. Office Action for U.S. Serial No. 09/655,542, filed September 6, 2000.						
PBT	August 8, 2003. International Search Report for PCT/US03/08513.						
PBT	August 25, 2003. Office Action for U.S. Serial No. 10/100,184, filed March 19, 2002.						
PBT	September 15, 2003. Office Action for U.S. Serial No. 09/928,474, filed August 14, 2001.						
PBT	November 5, 2003. Office Action for U.S. Serial No. 10/172,977, filed June 18, 2002.						
PBT	December 1, 2003. Office Action for U.S. Serial No. 10/173,108, filed June 18, 2002.						
PBT	December 11, 2003. Office Action for U.S. Serial No. 09/943,383, filed August 31, 2001.						
PBT	December 16, 2003. International Search Report for PCT/US03/23964.						
PBT	January 20, 2004. Office Action for U.S. Serial No. 09/927,444, filed August 13, 2001.						
PBT	January 23, 2004. International Search Report for PCT/US02/24860.						
PBT	February 2, 2004. Office Action for U.S. Serial No. 09/363,966, filed July 29, 1999.						
EXAMINER 				DATE CONSIDERED 11-10-2004			

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				APPLICANT Home L. KOH		GROUP 2812 2155	
				FILING DATE August 14, 2001			
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
PBT	4,207,520	06/10/80	Flora et al.	—	—	04/06/78	
PBT	4,209,744	06/24/80	Gerasimov et al.	—	—	03/27/78	
PBT	4,609,870	09/02/86	Lale et al.	—	—	09/13/84	
PBT	4,755,753	07/05/88	Chern	—	—	07/23/86	
PBT	5,427,878	06/27/95	Corliss	—	—	05/16/94	
PBT	5,534,289	07/09/96	Bilder et al.	—	—	01/03/95	
PBT	5,867,389	02/02/99	Hamada et al.	—	—	11/26/96	
PBT	6,041,263	03/21/00	Boston et al.	—	—	10/01/97	
PBT	6,077,412	06/20/00	Ting et al.	—	—	10/30/98	
PBT	6,271,670	08/07/01	Caffey	—	—	02/08/99	
PBT	6,400,162	06/04/02	Mallory et al.	—	—	07/21/00	
PBT	US 2002/0077031	06/20/02	Johansson et al.	—	—	07/06/01	
PBT	6,442,496	08/27/02	Pasady et al.	—	—	08/08/00	
PBT	6,563,308	05/13/03	Nagano et al.	—	—	03/27/01	
PBT	6,587,744	07/01/03	Stoddard et al.	—	—	06/20/00	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	WO 01/11679	02/15/01	WIPO	—	—	X	
PBT	WO 01/080306	10/25/01	WIPO	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	Miller, G. L., D. A. H. Robinson, and J. D. Wiley. July 1976. "Contactless measurement of semiconductor conductivity by radio frequency-free-carrier power absorption." <i>Rev. Sci. Instrum.</i> , Volume 47, No. 7. pp. 799 - 805.						
PBT	1999. "Contactless Bulk Resistivity/Sheet Resistance Measurement and Mapping Systems." www.Lehighton.com/fabtech1/index.html .						
PBT	2000. "Microsense II Capacitance Gaging System." www.adetech.com .						
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FOREIGN PATENT DOCUMENTS							
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						Yes	No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	El Chemali, Chadi et al. July/August 2000. "Multizone uniformity control of a chemical mechanical polishing process utilizing a pre- and postmeasurement strategy." <i>J. Vac. Sci. Technol.</i> Volume 18, No. 4, pp. 1287 - 1296.						
PBT	March 5, 2001. "KLA-Tencor Introduces First Production-worthy Copper CMP In-situ Film Thickness and End-point Control System." http://www.kla-tencor.com/j/servlet/NewsItem?newsItemID=74 .						
PBT	2002. "Microsense II - 5810: Non-Contact Capacitance Gaging Module." www.adetech.com .						
PBT	08 August 2003. PCT International Search Report from PCT/US03/08513.						
PBT	14 October 2003. PCT International Search Report from PCT/US02/21942.						
PBT	20 October 2003. PCT International Search Report from PCT/US02/19116.						
PBT	23 October 2003. PCT International Preliminary Examination Report from PCT/US01/24910.						
PBT	"NanoMapper wafer nanotopography measurement by ADE Phase Shift." http://www.phase-shift.com/nanomap.shtml .						
PBT	"Wafer flatness measurement of advanced wafers." http://www.phase-shift.com/wafer-flatness.shtml .						
PBT	"ADE Technologies, Inc. - 6360." http://www.adetech.com/6360.shtml .						
PBT	"3D optical profilometer MicroXAM by ADE Phase Shift." http://www.phase-shift.com/microxam.shtml .						
PBT	"NanoMapper FA factory automation wafer nanotopography measurement." http://www.phase-shift.com/nanomapperfa.shtml .						
EXAMINER <i>Phil Zastrow</i>				DATE CONSIDERED 11-10-2004			

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PBT	5,901,313	05/04/99	Wolf et al.	—	—	09/02/97
PBT	6,002,989	12/14/99	Shiba et al.	—	—	04/01/97
PBT	6,094,688	07/25/00	Mellen-Garnett et al.	—	—	03/12/98
PBT	6,340,602	01/22/02	Johnson et al.	—	—	02/12/01
PBT	6,345,288	02/05/02	Reed et al.	—	—	05/15/00
PBT	6,368,879	04/09/02	Toprac	—	—	09/22/99
PBT	US-2002/0107604	08/08/02	Riley et al.	—	—	12/06/00
PBT	6,470,230	10/22/02	Toprac et al.	—	—	01/04/00
PBT	6,482,660	11/19/02	Conchieri et al.	—	—	03/19/01
PBT	6,567,717	05/20/03	Krivokapic et al.	—	—	01/19/00

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OCT 20 2003

Technology Center 2100

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	WO 99/59200	11/18/99	WIPO	—	—	X	
PBT	WO 01/52319	07/19/01	WIPO	—	—	X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

PBT	Williams, Randy, Dadi Gudmundsson, Kevin Monahan, Raman Nurani, Meryl Stoller and J. George Shanthikumar. October 1999. "Optimized Sample Planning for Wafer Defect Inspection," <i>Semiconductor Manufacturing Conference Proceedings, 1999 IEEE International Symposium on Santa Clara, CA</i> . Piscataway, NJ. pp. 43 - 46.
PBT	23 July 2003. Invitation to Pay Additional Fees and Communication Relating to the Results of the Partial International Search for PCT/US02/19116.
PBT	01 August 2003. Written Opinion for PCT/US01/27406.
PBT	20 August 2003. Written Opinion for PCT/US01/22833.



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INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)				ATTY. DOCKET NO. 005123 USA/Consilium/Consilium		SERIAL NO. 09/928,473	
				APPLICANT Horne L. KOH			
				FILING DATE August 14, 2001		GROUP 2812-2155	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
PBT	3,767,900	10/23/73	Chao et al.	—	—	06/23/71	
PBT	3,920,965	11/18/75	Sohrwardy	—	—	03/04/74	
PBT	4,368,510	01/11/83	Anderson	—	—	10/20/80	
PBT	4,616,308	10/07/86	Morshedi et al.	—	—	12/02/85	
PBT	4,663,703	05/05/87	Axelby et al.	—	—	10/02/85	
PBT	5,347,446	09/13/94	Iino et al.	—	—	02/10/92	
PBT	5,519,605	05/21/96	Cawfield	—	—	10/24/94	
PBT	6,128,016	10/03/00	Coelho et al.	—	—	12/20/96	
PBT	6,219,711	04/17/01	Chari	—	—	10/01/97	
PBT	6,249,712	06/19/01	Boiquaye	—	—	09/25/96	
PBT	6,278,899	08/21/01	Piche et al.	—	—	10/06/98	
PBT	2001/0039462	11/08/01	Mendez et al.	—	—	04/02/01	
PBT	2001/0040997	11/15/01	Tsap et al.	—	—	05/15/01	
PBT	2002/0128805	09/12/02	Goldman et al.	—	—	12/26/00	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	EP 1 067 757	01/10/01	Europe	—	—	X	
PBT	WO 01/33277	05/10/01	WO	—	—	X	
PBT	WO 02/31613 A2	04/18/02	WO	—	—	X	
PBT	WO 02/31613 A3	04/18/02	WO	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	Levine, Martin D. 1985. <i>Vision in Man and Machine</i> . New York: McGraw-Hill, Inc. pp. ix-xii, 1-58.						
PBT	Pilu, Maurizio. September 2001. "Undoing Page Curl Distortion Using Applicable Surfaces." <i>IEEE International Conference on Image Processing</i> . Thessalonica, Greece.						
PBT	23 May 2003. Written Opinion for PCT/US01/24910.						
EXAMINER 				DATE CONSIDERED 11-10-2004			

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SHEET 1 OF 11

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Horne L. KOHFILING DATE
August 14, 2001GROUP
2812-2155

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	3,205,485	09/07/65	Noltingk	—	—	10/21/60
PBT	3,229,198	01/11/66	Libby	—	—	09/28/62
PBT	4,000,458	12/28/76	Miller et al.	—	—	08/21/75
PBT	4,302,721	11/24/81	Urbanek et al.	—	—	05/15/79
PBT	4,750,141	06/07/88	Judell et al.	—	—	11/26/85
PBT	4,757,259	07/12/88	Charpentier	—	—	11/05/86
PBT	4,938,600	07/03/90	Into	—	—	02/09/89
PBT	5,283,141	02/01/94	Yoon et al.	—	—	03/05/92
PBT	5,338,630	08/16/94	Yoon et al.	—	—	11/18/93
PBT	5,485,082	01/16/96	Wisspeintner et al.	—	—	04/05/90
PBT	5,497,381	03/05/96	O'Donoghue et al.	—	—	06/01/95
PBT	5,511,005	04/23/96	Abbe et al.	—	—	02/16/94
PBT	5,519,605	05/21/96	Cawfield	—	—	10/24/94
PBT	5,526,293	06/11/96	Mozumder et al.	—	—	12/17/93
PBT	5,541,510	06/30/96	Danielson	—	—	04/06/95
PBT	5,546,312	08/13/96	Mozumder et al.	—	—	02/24/94
PBT	5,553,195	09/03/96	Meijer	—	—	09/29/94
PBT	5,602,492	02/11/97	Cresswell et al.	—	—	04/28/94
PBT	5,617,023	04/01/97	Skalski	—	—	02/02/95
PBT	5,627,083	05/06/97	Tounai	—	—	05/12/95
PBT	5,642,296	06/24/97	Saxena	—	—	07/29/93
PBT	5,646,870	07/08/97	Krivokapic et al.	—	—	02/13/95
PBT	5,649,169	07/15/97	Berezin et al.	—	—	06/20/95
PBT	5,654,903	08/05/97	Reitman et al.	—	—	11/07/95
PBT	5,663,797	09/02/97	Sandhu	—	—	05/16/96
PBT	5,665,199	09/09/97	Sahota et al.	—	—	06/23/95
PBT	5,666,297	09/09/97	Britt et al.	—	—	05/13/94

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U.S. PATENT DOCUMENTS

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PBT	5,667,424	09/16/97	Pan	—	—	09/25/96
PBT	5,674,787	10/07/97	Zhao et al.	—	—	01/16/96
PBT	5,719,796	02/17/98	Chen	—	—	12/04/95
PBT	5,735,055	04/07/98	Hochbein et al.	—	—	04/23/96
PBT	5,761,064	06/02/98	La et al.	—	—	10/06/95
PBT	5,777,901	07/07/98	Berezin et al.	—	—	09/29/95
PBT	5,787,021	07/28/98	Samaha	—	—	12/18/95
PBT	5,787,269	07/28/98	Hyodo	—	—	09/19/95
PBT	5,825,913	10/20/98	Rostami et al.	—	—	07/18/95
PBT	5,857,258	01/12/99	Penzes et al.	—	—	05/12/94
PBT	5,910,846	06/08/99	Sandhu	—	—	08/19/97
PBT	5,943,237	08/24/99	Van Boxem	—	—	10/17/97
PBT	5,960,185	09/28/99	Nguyen	—	—	06/24/96
PBT	5,961,369	10/05/99	Bartels et al.	—	—	06/04/98
PBT	5,978,751	11/02/99	Pence et al.	—	—	02/25/97
PBT	6,017,771	01/25/00	Yang et al.	—	—	04/27/98
PBT	6,036,349	03/14/00	Gombar	—	—	07/26/96
PBT	6,064,759	05/16/00	Buckley et al.	—	—	11/06/97
PBT	6,072,313	06/06/00	Li et al.	—	—	06/17/97
PBT	6,097,887	08/01/00	Hardikar et al.	—	—	10/27/97
PBT	6,108,092	08/22/00	Sandhu	—	—	06/08/99
PBT	6,127,263	10/03/00	Parikh	—	—	07/10/98
PBT	6,136,163	10/24/00	Cheung et al.	—	—	03/05/99
PBT	6,141,660	10/31/00	Bach et al.	—	—	07/16/98
PBT	6,143,646	11/07/00	Wetzel	—	—	06/03/97
PBT	6,148,099	11/14/00	Lee et al.	—	—	07/03/97
PBT	6,148,239	11/14/00	Funk et al.	—	—	12/12/97

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EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	6,159,075	12/12/00	Zhang	—	—	10/13/99
PBT	6,159,644	12/12/00	Satoh et al.	—	—	03/06/96
PBT	6,161,054	12/12/00	Rosenthal et al.	—	—	09/17/98
PBT	6,169,931	01/02/01	Runnels	—	—	06/29/98
PBT	6,172,756	01/09/01	Chalmers et al.	—	—	12/11/98
PBT	6,173,240	01/09/01	Sepulveda et al.	—	—	11/02/98
PBT	6,191,864	02/20/01	Sandhu	—	—	02/29/00
PBT	6,204,165	03/20/01	Ghoshal	—	—	06/24/99
PBT	6,210,983	04/03/01	Atchison et al.	—	—	06/15/99
PBT	6,214,734	04/10/01	Bothra et al.	—	—	11/20/98
PBT	6,217,412	04/17/01	Campbell et al.	—	—	08/11/99
PBT	6,222,936	04/24/01	Phan et al.	—	—	09/13/99
PBT	2001/0001755	05/24/01	Sandhu et al.	—	—	12/29/00
PBT	2001/0003084	06/07/01	Finarov	—	—	12/04/00
PBT	6,246,972	06/12/01	Klimasauskas	—	—	05/27/99
PBT	6,276,989	08/21/01	Campbell et al.	—	—	08/11/99
PBT	6,280,289	08/28/01	Wiswesser et al.	—	—	11/02/98
PBT	6,284,622	09/04/01	Campbell et al.	—	—	10/25/99
PBT	6,287,879	09/11/01	Gonzales et al.	—	—	08/11/99
PBT	6,290,572	09/18/01	Hofmann	—	—	03/23/00
PBT	6,304,999	10/16/01	Toprac et al.	—	—	10/23/00
PBT	2001/0030366	10/18/01	Nakano et al.	—	—	03/07/01
PBT	6,307,628	10/23/01	Lu et al.	—	—	08/18/00
PBT	6,314,379	11/06/01	Hu et al.	—	—	12/04/97
PBT	2001/0039462	11/08/01	Mendez et al.	—	—	04/02/01
PBT	6,320,655	11/20/01	Matsushita et al.	—	—	03/15/00

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PBT	2001/0042690	11/22/01	Talieh	—	—	12/14/00
PBT	6,324,481	11/27/01	Atchison et al.	—	—	06/15/99
PBT	6,334,807	01/01/02	Lebel et al.	—	—	04/30/99
PBT	6,336,841	01/08/02	Chang	—	—	03/29/01
PBT	2002/0032499	03/14/02	Wilson et al.	—	—	05/04/01
PBT	6,360,133	03/19/02	Campbell et al.	—	—	06/17/99
PBT	6,360,184	03/19/02	Jacquez	—	—	03/26/97
PBT	6,368,883	04/09/02	Bode et al.	—	—	08/10/99
PBT	6,368,884	04/09/02	Goodwin et al.	—	—	04/13/00
PBT	6,379,980	04/30/02	Toprac	—	—	07/26/00
PBT	6,388,253	05/14/02	Su	—	—	11/02/00
PBT	2002/0058460	05/16/02	Lee et al.	—	—	09/14/01
PBT	6,395,152	05/28/02	Wang	—	—	07/02/99
PBT	6,397,114	05/28/02	Eryurek et al.	—	—	05/03/99
PBT	6,405,096	06/11/02	Toprac et al.	—	—	08/10/99
PBT	6,405,144	06/11/02	Toprac et al.	—	—	01/18/00
PBT	2002/0070126	06/13/02	Sato et al.	—	—	09/19/01
PBT	2002/0081951	06/27/02	Boyd et al.	—	—	02/20/02
PBT	2002/0089676	07/11/02	Pecen et al.	—	—	04/26/00
PBT	2002/0102853	08/01/02	Li et al.	—	—	12/20/01
PBT	2002/0107599	08/08/02	Patel et al.	—	—	01/25/01
PBT	6,435,952	08/20/02	Boyd et al.	—	—	06/30/00
PBT	6,438,438	08/20/02	Takagi et al.	—	—	01/02/98
PBT	2002/0113039	08/22/02	Mok et al.	—	—	02/16/01
PBT	6,440,295	08/27/02	Wang	—	—	02/04/00
PBT	2002/0127950	09/12/02	Hirose et al.	—	—	03/08/01
PBT	6,455,937	09/24/02	Cunningham	—	—	03/17/99

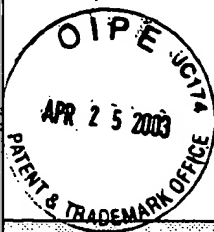
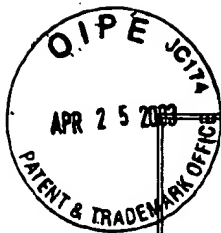
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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	2002/0149359	10/17/02	Crouzen et al.	—	—	08/18/01
PBT	6,479,902	11/12/02	Lopatin et al.	—	—	06/29/00
PBT	6,479,990	11/12/02	Mednikov et al.	—	—	06/18/01
PBT	2002/0185658	12/12/02	Inoue et al.	—	—	06/14/01
PBT	2002/0193902	12/19/02	Shanmugasundram et al.	—	—	06/18/02
PBT	2002/0197745	12/26/02	Shanmugasundram et al.	—	—	08/31/01
PBT	2002/0197934	12/26/02	Paik	—	—	11/30/01
PBT	2002/0199082	12/26/02	Shanmugasundram et al.	—	—	06/18/02
PBT	6,503,839	01/07/03	Gonzales et al.	—	—	07/03/01
PBT	2003/0020909	01/30/03	Adams et al.	—	—	04/09/01
PBT	2003/0020928	01/30/03	Ritzdorf et al.	—	—	07/09/01
PBT	6,517,413	02/11/03	Hu et al.	—	—	10/25/00

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	61-66104	04/04/86	Japan	—	—	X	
PBT	3-202710	09/04/91	Japan	—	—	X	
PBT	8-23166	01/23/96	Japan	—	—	X	
PBT	9-246547	09/19/97	Japan	—	—	X	
PBT	WO 98/05066	02/05/98	WIPO	—	—	X	
PBT	10-34522	02/10/98	Japan	—	—	X	
PBT	0 869 652	10/07/98	Europe	—	—	X	
PBT	WO 99/09371	02/25/99	WIPO	—	—	X	
PBT	0 910 123	04/21/99	Europe	—	—	X	
PBT	0 932 194	07/28/99	Europe	—	—	X	
PBT	WO 00/00874	01/06/00	WIPO	—	—	X	
PBT	2000-183001	06/30/00	Japan	—	—	X	

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						Yes	No
PBT	1 071 128	01/24/01	Europe	—	—	X	
PBT	WO 01/18623	03/15/01	WIPO	—	—	X	
PBT	WO 01/25865	04/12/01	WIPO	—	—	X	
PBT	434103	05/16/01	Taiwan	—	—	X	
PBT	436383	05/28/01	Taiwan	—	—	X	
PBT	455938	09/21/01	Taiwan	—	—	X	
PBT	455976	09/21/01	Taiwan	—	—	X	
PBT	2001-284299	10/12/01	Japan	—	—	X	
PBT	2001-305108	10/31/01	Japan	—	—	X	
PBT	2002-9030	01/11/02	Japan	—	—	X	
PBT	WO 02/074491	09/26/02	WIPO	—	—	X	
PBT	2002-343754	11/29/02	Japan	—	—	X	

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PBT	Ostanin, Yu.Ya. October 1981. "Optimization of Thickness Inspection of Electrically Conductive Single-Layer Coatings with Laid-on Eddy-Current Transducers (Abstract)." <i>Defektoskopiya</i> , vol. 17, no. 10, pp. 45-52. Moscow, USSR.
PBT	February 1984. "Substrate Screening Process." <i>IBM Technical Disclosure Bulletin</i> , pp. 4824-4825.
PBT	Herrmann, D. 1988. "Temperature Errors and Ways of Elimination for Contactless Measurement of Shaft Vibrations (Abstract)." <i>Technisches Messen</i> TM , vol. 55, no. 1, pp. 27-30. West Germany.
PBT	Lin, Kuang-Kuo and Costas J. Spanos. November 1990. "Statistical Equipment Modeling for VLSI Manufacturing: An Application for LPCVD." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 3, n. 4, pp. 216-229.
PBT	Chang, Norman H. and Costas J. Spanos. February 1991. "Continuous Equipment Diagnosis Using Evidence Integration: An LPCVD Application." <i>IEEE Transactions on Semiconductor Manufacturing</i> , v. 4, n. 1, pp. 43-51.
PBT	Larrabee, G. B. May 1991. "The Intelligent Microelectronics Factory of the Future (Abstract)." <i>IEEE/SEMI International Semiconductor Manufacturing Science Symposium</i> , pp. 30-34. Burlingame, CA.
PBT	Burke, Peter A. June 1991. "Semi-Empirical Modelling of SiO ₂ Chemical-Mechanical Polishing Planarization." <i>VMIC Conference, 1991 IEEE</i> , pp. 379-384. IEEE.

EXAMINER *Phil Sadrian*

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OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	May 1992. "Laser Ablation Endpoint Detector." <i>IBM Technical Disclosure Bulletin</i> , pp. 333-334.
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PBT	February 1993. "Electroless Plating Scheme to Hermetically Seal Copper Features." <i>IBM Technical Disclosure Bulletin</i> , pp. 405-406.
PBT	Scarr, J. M. and J. K. Zelisse. April 1993. "New Topology for Thickness Monitoring Eddy Current Sensors (Abstract)." <i>Proceedings of the 36th Annual Technical Conference</i> , Dallas, Texas.
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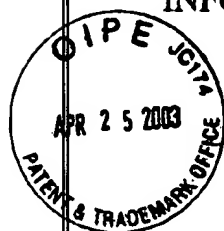
DATE CONSIDERED

11-10-2004

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION (PTO-1449)		ATTY. DOCKET NO. 005123 USA/Consilium/Consilium	SERIAL NO. 09/928,473
		APPLICANT Horne L. KOH	
		FILING DATE August 14, 2001	GROUP 2812 2155
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APPLICANT
Horne L. KOH

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		FILING DATE August 14, 2001	GROUP 2812- 2155
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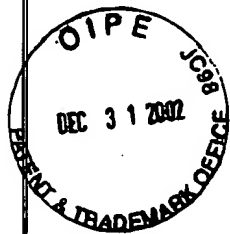
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		APPLICANT Horne L. KOH	
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EXAMINER <i>Phil Buchanan</i> DATE CONSIDERED <i>11-10-2004</i>			

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ATTY. DOCKET NO.
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APPLICANT
Horne L. KOH

FILING DATE
August 14, 2001

GROUP
2812 2155

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
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PBT	5,375,064	12/20/94	Bollinger	1	1	12/02/93
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EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	Yes	No
PBT	WO 95/34866	12/21/95	WO				X	
PBT	WO 98/45090	10/15/98	WO				X	
PBT	EP 0 881 040 A2	12/02/98	Europe				X	
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EXAMINER

Phil Bafran

DATE CONSIDERED

11-10-2004

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INFORMATION DISCLOSURE CITATION IN AN APPLICATION 				ATTY. DOCKET NO. 005123 USA/Consilium/Consilium		SERIAL NO. 09/928473 BIOLOGY CENTER 2800 <div style="float: right; text-align: center;"> RECEIVED JAN - 2 2003 </div>	
				APPLICANT Horne L. KOH			
				FILING DATE August 14, 2001		GROUP 2812-2155	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
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PBT	6,183,345 B1	02/06/01	Kamono et al.	1	1	03/20/98	
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EXAMINER'S INITIALS	PUBLICATION / PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation <div style="float: right; text-align: center;"> RECEIVED APR 17 2003 BIOLOGY ROOM </div>	
PBT	WO 01/52055 A3	07/19/01	WO	1	1	X	
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APPLICANT
Horne L. KOH

FILING DATE
August 14, 2001

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2812-2155

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
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						Yes	No
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APPLICANT
Home L. KOH

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August 14, 2001

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U.S. PATENT DOCUMENTS

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PBT	5,525,808	06/11/96	Irie et al.	—	—	12/20/94
PBT	5,586,039	12/17/96	Hirsch et al.	—	—	02/27/95
PBT	5,603,707	02/18/97	Trombetta et al.	—	—	11/28/95
PBT	5,664,987	09/09/97	Renteln	—	—	09/04/96
PBT	5,812,407	09/22/98	Sato et al.	—	—	08/12/97
PBT	5,828,778	10/27/98	Hagi et al.	—	—	06/12/96
PBT	5,832,224	11/03/98	Fehskens et al.	—	—	06/14/96

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
	61-171147	08/01/86	Japan	—	—		X
	6-184434	07/05/94	Japan	—	—		X
	0 621 522 A2	10/26/94	Europe	—	—	X	
	8-50161	02/20/96	Japan	—	—		X
	8-304023	11/22/96	Japan	—	—		X

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

	February 1984. "Method and Apparatus of in Situ Measurement and Overlay Error Analysis for Correcting Step and Repeat Lithographic Cameras." <i>IBM Technical Disclosure Bulletin</i> , pp. 4855-4859.
	October 1984. "Method to Characterize the Stability of a Step and Repeat Lithographic System." <i>IBM Technical Disclosure Bulletin</i> , pp. 2857-2860.

EXAMINER

Phil Bastien

DATE CONSIDERED

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**INFORMATION DISCLOSURE
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(PTO-1449)

ATTY. DOCKET NO.
5123/Consilium/DV

SERIAL NO.
09/928,473

APPLICANT
Horne L. KOH

FILING DATE
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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	5,859,964	01/12/99	Wang et al.	—	—	10/25/96
PBT	5,863,807	01/26/99	Jang et al.	—	—	03/15/96
PBT	5,870,306	02/09/99	Harada	—	—	06/13/97
PBT	5,903,455	05/11/99	Sharpe, Jr. et al.	—	—	12/12/96
PBT	5,916,016	06/29/99	Bothra	—	—	10/23/97
PBT	5,923,553	07/13/99	Yi	—	—	10/05/96
PBT	5,930,138	07/27/99	Lin et al.	—	—	09/10/97
PBT	5,940,300	08/17/99	Ozaki	—	—	05/08/97
PBT	5,960,214	09/28/99	Sharpe, Jr. et al.	—	—	12/04/96
PBT	5,963,881	10/05/99	Kahn et al.	—	—	10/20/97
PBT	5,982,920	11/09/99	Tobin, Jr. et al.	—	—	01/08/97
PBT	6,041,270	03/21/00	Steffan et al.	—	—	12/05/97
PBT	6,078,845	06/20/00	Friedman	—	—	11/25/96
PBT	6,112,130	08/29/00	Fukuda et al.	—	—	10/01/97
PBT	6,148,246	11/14/00	Kawazome	—	—	06/10/98

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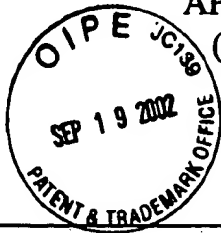
EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	0 747 795 A2	12/11/96	Europe	—	—	X	
PBT	10-173029	06/26/98	Japan	—	—		X
PBT	0 895 145 A1	02/03/99	Europe	—	—	X	
PBT	11-126816	05/11/99	Japan	—	—		X

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PBT	Schmid, Hans Albrecht. 1995. "Creating the Architecture of a Manufacturing Framework by Design Patterns." Austin, Texas: OOPSLA.		
PBT	Baliga, John. July 1999. "Advanced Process Control: Soon to be a Must." Cahners Semiconductor International. www.semiconductor.net/semiconductor/issues/issues/1999/jul99/docs/feature1.asp		
EXAMINER	Phylisacian	DATE CONSIDERED	11-10-2004

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U.S. PATENT DOCUMENTS

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PBT	6,175,777	01/16/01	Kim	—	—	01/16/98
PBT	6,178,390	01/23/01	Jun	—	—	09/08/98
PBT	6,185,324	02/06/01	Ishihara et al.	—	—	01/31/95
PBT	6,192,291	02/20/01	Kwon	—	—	10/08/98
PBT	6,197,604	03/06/01	Miller et al.	—	—	10/01/98
PBT	6,211,094	04/03/01	Jun et al.	—	—	08/23/99
PBT	6,226,792	05/01/01	Goiffon et al.	—	—	10/14/98
PBT	6,230,069	05/08/01	Campbell et al.	—	—	06/26/98
PBT	6,236,903	05/22/01	Kim et al.	—	—	09/25/98
PBT	6,240,330	05/29/01	Kurtzberg et al.	—	—	05/28/97

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EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	11-135601	05/21/99	Japan	—	—		X
PBT	WO 00/05759	02/03/00	WO	—	—	X	
PBT	WO 00/35063	06/15/00	WO	—	—	X	

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PBT	July 5, 2001. "Motorola and Advanced Micro Devices Buy ObjectSpace Catalyst Advanced Process Control Product for Five Wafer Fabs." Semiconductor FABTECH. www.semiconductorfabtech.com/industry.news/9907/20.07.shtml
PBT	October 15, 2001. Search Report prepared by the Austrian Patent Office for Singapore Patent Application No. 200004286-1.
PBT	Johnson, Bob. June 10, 2002. "Advanced Process Control Key to Moore's Law." Gartner, Inc.
PBT	July 9, 2002. International Search Report prepared by the European Patent Office for PCT/US01/24910.
PBT	July 29, 2002. International Search Report prepared by the European Patent Office for PCT/US01/27407.
PBT	Sonderman, Thomas. 2002. "APC as a Competitive Manufacturing Technology: AMD's Vision for 300mm." AEC/APC.

EXAMINER

Phil Brogan

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11-10-2004

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				APPLICANT Horne L. KOH			
				FILING DATE August 14, 2001		GROUP 2812 2155	

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U.S. PATENT DOCUMENTS						
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE
PBT	6,240,331	05/29/01	Yun	—	—	08/18/98
PBT	6,248,602	06/19/01	Bode et al.	—	—	11/01/99
PBT	6,252,412	06/26/01	Talbot et al.	—	—	01/08/99
PBT	6,263,255	07/17/01	Tan et al.	—	—	05/18/98
PBT	6,292,708	09/18/01	Allen et al.	—	—	06/11/98
PBT	6,298,274	10/02/01	Inoue	—	—	09/01/99
PBT	6,303,395	10/16/01	Nulman	—	—	06/01/99
PBT	6,345,315	02/05/02	Mishra	—	—	08/12/98
PBT	6,366,934	04/02/02	Cheng et al.	—	—	06/02/99

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EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	WO 00/79355 A1	12/28/00	WO	—	—	X	
PBT	2001-76982	03/23/01	Japan	—	—		X
PBT	WO 01/33501 A1	05/10/01	WO	—	—	X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)	

EXAMINER <i>Phu Phan</i>	DATE CONSIDERED <i>11-10-2004</i>
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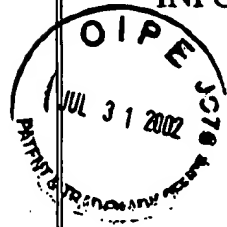
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U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO.	DATE	NAME	CLASS	SUBCLASS	FILING DATE	
PBT	5,220,517	06/15/93	Sierk et al.			08/31/90	
PBT	5,329,463	07/12/94	Sierk et al.			01/13/93	
PBT	5,495,417	02/27/96	Fuduka et al.			03/16/93	
PBT	5,497,316	03/05/96	Sierk et al.			04/04/95	
PBT	5,503,707	04/02/96	Maung et al.			09/22/93	
PBT	5,508,947	04/16/96	Sierk et al.			05/13/94	
PBT	5,657,254	08/12/97	Sierk et al.			04/15/96	
PBT	5,694,325	12/02/97	Fukuda et al.			11/22/95	
PBT	5,838,595	11/17/98	Sullivan et al.			11/25/96	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT NO./ PUBLICATION NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	2,050,247	08/29/91	Canada	—	—	X	
PBT	2,165,847	08/29/91	Canada	—	—	X	
PBT	2,194,855	08/29/91	Canada	—	—	X	
PBT	05-151231	06/18/93	Japan	—	—		X
PBT	05-216896	08/27/93	Japan	—	—		X
PBT	05-266029	10/15/93	Japan	—	—		X
PBT	06-110894	04/22/94	Japan	—	—		X
PBT	06-176994	06/24/94	Japan	—	—		X
PBT	06-252236	09/09/94	Japan	—	—		X
PBT	06-260380	09/16/94	Japan	—	—		X
PBT	1072967A3	11/21/01	Europe	—	—	X	
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
EXAMINER <i>Phil Bao Tran</i>				DATE CONSIDERED <i>11-10-2004</i>			

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				APPLICANT Horne L. KOH			
				FILING DATE August 14, 2001		GROUP 2812 2155	
U.S. PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT APPLICATION NO.	NAME	TITLE	CLASS	SUBCLASS	FILING DATE	
PBT	09/927,444	Ward et al.	Dynamic Control of Wafer Processing Paths in Semiconductor Manufacturing Processes			08/13/01	
FOREIGN PATENT DOCUMENTS							
EXAMINER'S INITIALS	PATENT/ PUBLICATION NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)							
PBT	Zhou, Zhen-Hong and Rafael Reif. August 1995. "Epi-Film Thickness Measurements Using Emission Fourier Transform Infrared Spectroscopy—Part II: Real-Time <i>in Situ</i> Process Monitoring and Control." IEEE Transactions on Semiconductor Manufacturing, Vol. 8, No. 3.						
PBT	Telfeyan, Roland, James Moyne, Nauman Chaudhry, James Pugmire, Scott Shellman, Duane Boning, William Moyne, Arnon Hurwitz, and John Taylor. October 1995. "A Multi-Level Approach to the Control of a Chemical-Mechanical Planarization Process." Minneapolis, Minnesota: 42 nd National Symposium of the American Vacuum Society.						
PBT	Chang, E., B. Stine, T. Maung, R. Divecha, D. Boning, J. Chung, K. Chang, G. Ray, D. Bradbury, O. S. Nakagawa, S. Oh, and D. Bartelink. December 1995. "Using a Statistical Metrology Framework to Identify Systematic and Random Sources of Die- and Wafer-level ILD Thickness Variation in CMP Processes." Washington, D.C.: International Electron Devices Meeting.						
PBT	Smith, Taber, Duane Boning, James Moyne, Arnon Hurwitz, and John Curry. June 1996. "Compensating for CMP Pad Wear Using Run by Run Feedback Control." Santa Clara, California: VLSI Multilevel Interconnect Conference.						
EXAMINER <i>Phil Sauter</i>				DATE CONSIDERED 11-10-2004			

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U.S. PATENT DOCUMENTS

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EXAMINER'S INITIALS	PATENT/ PUBLICATION NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

PBT	Boning, Duane, William Moyne, Taber Smith, James Moyne, Roland Telfeyan, Arnon Hurwitz, Scott Shellman, and John Taylor. October 1996. "Run by Run Control of Chemical-Mechanical Polishing." <i>IEEE Trans. CPMT (C)</i> , Vol. 19, No. 4, pp. 307-314.
PBT	Edgar, Thomas F., Stephanie W. Butler, Jarrett Campbell, Carlos Pfeiffer, Chris Bode, Sung Bo Hwang, and K.S. Balakrishnan. May 1998. "Automatic Control in Microelectronics Manufacturing: Practices, Challenges, and Possibilities." <i>Automatica</i> , Vol. 36, pp. 1567-1603, 2000.
PBT	Chemali, Chadi El, James Moyne, Kareemullah Khan, Rock Nadeau, Paul Smith, John Colt, Jonathan Chapple-Sokol, and Tarun Parikh. November 1998. "Multizone Uniformity Control of a CMP Process Utilizing a Pre and Post-Measurement Strategy." Seattle, Washington: SEMETECH Symposium.
PBT	Moyne, James. October 1999. "Advancements in CMP Process Automation and Control." Hawaii: (Invited paper and presentation to) Third International Symposium on Chemical Mechanical Polishing in IC Device Manufacturing: 196 th Meeting of the Electrochemical Society.
PBT	Lee, Brian, Duane S. Boning, Winthrop Baylies, Noel Poduje, Pat Hester, Yong Xia, John Valley, Chris Koliopoulos, Dale Hetherington, HongJiang Sun, and Michael Lacy. April 2001. "Wafer Nanotopography Effects on CMP: Experimental Validation of Modeling Methods." San Francisco, California: Materials Research Society Spring Meeting.
PBT	NovaScan 2020. February 2002. "Superior Integrated Process Control for Emerging CMP High-End Applications."

EXAMINER

Phil Burton

DATE CONSIDERED 11-10-2004

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U.S. PATENT DOCUMENTS

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PBT	4,796,194	01/03/89	Atherton	—	—	08/20/86
PBT	5,089,970	02/18/92	Lee et al.	—	—	10/05/89
PBT	5,108,570	04/28/92	Wang	—	—	03/30/90
PBT	5,236,868	08/17/93	Nulman	—	—	04/20/90
PBT	5,260,868	11/09/93	Gupta et al.	—	—	10/15/91
PBT	5,295,242	03/15/94	Mashruwala et al.	—	—	11/02/90
PBT	5,309,221	05/03/94	Fischer et al.	—	—	12/31/91
PBT	5,367,624	11/22/94	Cooper	—	—	06/11/93
PBT	5,398,336	03/14/95	Tantry et al.	—	—	06/16/93
PBT	5,402,367	03/28/95	Sullivan et al.	—	—	07/19/93
PBT	5,408,405	04/18/95	Mozumder et al.	—	—	09/20/93
PBT	5,410,473	04/25/95	Kaneko et al.	—	—	12/16/92
PBT	5,490,097	02/06/96	Swenson et al.	—	—	08/06/93
PBT	5,629,216	05/13/97	Wijaranakula et al.	—	—	02/27/96

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EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No
PBT	HEI 1-283934	11/15/89	Japan	—	—	X	
PBT	HEI 8-149583	06/07/96	Japan	—	—	X	
PBT	HEI 9-34535	02/07/97	Japan	—	—	X	
PBT	EP 0877308	11/11/98	Europe	—	—	X	
PBT	HEI 11-67853	03/09/99	Japan	—	—	X	

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

PBT	Dishon, G., D. Eylon, M. Finarov, and A. Shulman. "Dielectric CMP Advanced Process Control Based on Integrated Monitoring." Ltd. Rehoveth, Israel: Nova Measuring Instruments.
PBT	Runyan, W. R., and K. E. Bean. 1990. "Semiconductor Integrated Circuit Processing Technology." pg. 48. Reading, Massachusetts: Addison-Wesley Publishing Company.

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PBT	5,661,669	08/26/97	Mozumder et al.	—	—	06/07/95
PBT	5,698,989	12/16/97	Nulman	—	—	09/13/96
PBT	5,719,495	02/17/98	Moslehi	—	—	06/05/96
PBT	5,740,429	04/14/98	Wang et al.	—	—	07/07/95
PBT	5,751,582	05/12/98	Saxena et al.	—	—	09/24/96
PBT	5,754,297	05/19/98	Nulman	—	—	04/14/97
PBT	5,764,543	06/09/98	Kennedy	—	—	06/16/95
PBT	5,808,303	09/15/98	Schlagheck et al.	—	—	01/29/97
PBT	5,883,437	03/16/99	Maruyama et al.	—	—	12/28/95
PBT	5,910,011	06/08/99	Cruse	—	—	05/12/97
PBT	6,054,379	04/25/00	Yau et al.	—	—	02/11/98

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EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUBCLASS	Translation	
						Yes	No

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PBT	Zorich, Robert. 1991. <i>Handbook of Quality Integrated Circuit Manufacturing</i> . pp. 464-498 San Diego, California: Academic Press, Inc.		
PBT	Rampalli, Prasad, Arakere Ramesh, and Nimish Shah. 1991. <i>CEPT—A Computer-Aided Manufacturing Application for Managing Equipment Reliability and Availability in the Semiconductor Industry</i> . New York, New York: IEEE.		
PBT	Moyne, James R., Nauman Chaudhry, and Roland Telfeyan. 1995. "Adaptive Extensions to a Multi-Branch Run-to-Run Controller for Plasma Etching." <i>Journal of Vacuum Science and Technology</i> . Ann Arbor, Michigan: University of Michigan Display Technology Manufacturing Center.		
PBT	Moyne, James, Roland Telfeyan, Arnon Hurwitz, and John Taylor. August 1995. "A Process-Independent Run-to-Run Controller and Its Application to Chemical-Mechanical Planarization." <i>SEMI/IEEE Advanced Semiconductor Manufacturing Conference and Workshop</i> . Ann Arbor, Michigan: The University of Michigan, Electrical Engineering & Computer Science Center for Display Technology & Manufacturing.		
EXAMINER	Phil Bastian	DATE CONSIDERED	11-10-2004

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U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS
PBT	09/363,966	07/29/99	Arackaparambil et al.	Computer Integrated Manufacturing Techniques	—	—
PBT	09/469,227	12/22/99	Somekh et al.	Multi-Tool Control System, Method and Medium	—	—
PBT	09/619,044	07/19/00	Yuan	System and Method of Exporting or Importing Object Data in a Manufacturing Execution System	—	—
PBT	09/637,620	08/11/00	Chi et al.	Generic Interface Builder	—	—
PBT	09/656,031	09/06/00	Chi et al.	Dispatching Component for Associating Manufacturing Facility Service Requestors with Service Providers	—	—

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
						Yes	No
—	—	—	—	—	—	—	—

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PBT	Dishon, G., M. Finarov, R. Kipper, J.W. Curry, T. Schraub, D. Trojan, 4 th Stambaugh, Y. Li and J. Ben-Jacob. February 1996. "On-Line Integrated Metrology for CMP Processing." Santa Clara, California: VMIC Speciality Conferences, 1 st International CMP Planarization Conference.
PBT	SEMI. [1986] 1996. "Standard for Definition and Measurement of Equipment Reliability, Availability, and Maintainability (RAM)." SEMI E10-96.
PBT	Van Zant, Peter. 1997. <i>Microchip Fabrication: A Practical Guide to Semiconductor Processing</i> . Third Edition, pp. 472-478. New York, New York: McGraw-Hill.
PBT	Campbell, W. Jarrett, and Anthony J. Toprac. February 11-12, 1998. "Run-to-Run Control in Microelectronics Manufacturing." Advanced Micro Devices, TWMCC.
PBT	Consilium. August 1998. <i>Quality Management Component: QMC™ and QMC-Link™ Overview</i> . Mountain View, California: Consilium, Inc.
PBT	Consilium. 1998. <i>FAB300™</i> . Mountain View, California: Consilium, Inc.
PBT	Khan, Kareemullah, Victor Solakhain, Anthony Ricci, Tier Gu, and James Moyne. 1998. "Run-to-Run Control of ITO Deposition Process." Ann Arbor, Michigan.
PBT	Moyne, James and John Curry. June 1998. "A Fully Automated Chemical-Mechanical Planarization Process."

EXAMINER

Philipson

DATE CONSIDERED 11-10-2004

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ATTY. DOCKET NO.
5123/Consilium/DV

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09/928,473

APPLICANT
Horne L. Koh

FILING DATE
August 14, 2001

GROUP

2155

U.S. PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT APPLICATION NO.	FILING DATE	NAME	TITLE	CLASS	SUB- CLASS
PBT	09/655,542	09/06/00	Yuan	System, Method and Medium for Defining Palettes to Transform an Application Program Interface for a Service	—	—
PBT	09/725,908	11/30/00	Chi et al.	Dynamic Subject Information Generation in Message Services of Distributed Object Systems	—	—
PBT	09/800,980	03/08/01	Hawkins et al.	Dynamic and Extensible Task Guide	—	—
PBT	09/811,667	03/20/01	Yuan et al.	Fault Tolerant and Automated Computer Software Workflow	—	—
PBT	09/928,474	08/14/01	Krishnamurthy et al.	Experiment Management System, Method and Medium	—	—

FOREIGN PATENT DOCUMENTS

EXAMINER'S INITIALS	PATENT NO.	DATE	COUNTRY	CLASS	SUB- CLASS	Translation	
						Yes	No

OTHER ART (Including Author, Title, Date, Pertinent Pages, Etc.)

PBT	SEMI. July 1998. <i>New Standard: Provisional Specification for CIM Framework Domain Architecture</i> . Mountain View, California: SEMI Standards. SEMI Draft Doc. 2817.
PBT	Consilium. July 1999. "Increasing Overall Equipment Effectiveness (OEE) in Fab Manufacturing by Implementing Consilium's Next-Generation Manufacturing Execution System - MES II." Semiconductor Fabtech Edition 10.
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Philip Brown

DATE CONSIDERED

11-10-2004

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